

Appl. No. 10/765,807
Amendment dated June 6, 2006
Response to Office Action of March 24, 2006

Amendments to the Claims:

This Listing of Claims will replace all prior versions, and Listings, of claims in the application.

Listing of Claims:

Claim 1 (currently amended): The method of altering a fluid-borne contaminant, comprising the steps of:

providing a positive-displacement pump having an inlet and an outlet;
connecting said pump inlet to a source of contaminated fluid;
operating said pump at a pressure ratio ~~of at least 2.0 so as to sufficiently~~ sufficient to
elevate the pressure and temperature of the fluid and contaminants passing through said pump;
~~and controlling the time during which the temperature of said fluid and contaminants are~~
~~elevated; thereby~~ to alter substantially all of said contaminants passing through said pump.

Claim 2 (withdrawn): The method as set forth in claim 1 wherein said contaminants are altered by chemical reduction.

Claim 3 (original): The method as set forth in claim 1 wherein said contaminants are altered by oxidation.

Claim 4 (withdrawn): The method as set forth in claim 1 wherein said contaminants are altered by combustion.

Claim 5 (withdrawn): The method as set forth in claim 1 wherein said contaminants include a particle.

Claim 6 (original): The method as set forth in claim 1 wherein said contaminants include a biological agent.

Claim 7 (original): The method as set forth in claim 6 wherein said biological agent is selected from the group consisting of: a spore, a bacteria, a virus, a pathogen, a fungus, and a pollen.

Claim 8 (original): The method as set forth in claim 1 wherein said fluid includes a compressible gas.

Claim 9 (original): The method as set forth in claim 1 wherein at least some of said contaminants are entrained in said gas.

Claim 10 (original): The method as set forth in claim 1 wherein said pump is a Roots-type positive displacement pump.

Claim 11 (withdrawn): The method as set forth in claim 1 wherein said pump is a compressor.

Claim 12 (withdrawn): The method as set forth in claim 1 wherein said pump includes a piston-and-cylinder.

Claim 13 (currently amended): The method as set forth in claim 1 wherein ~~said pressure ratio is~~ the pressure at said pump outlet divided by the pressure at said pump inlet is at least 2.0.

Claim 14 (currently amended): The method as set forth in claim 1 wherein ~~said~~ the time during which the temperature of said fluid and contaminants is elevated is controlled by restricting the flow of fluid and contaminants passing through said pump.

Claim 15 (original): The method as set forth in claim 1 wherein the temperature of said fluid and contaminants is heated to at least about 200° C. at said pump outlet.

Claim 16 (original): The method as set forth in claim 1 wherein said pump is a first pump, and further comprising the additional steps of:

- providing a second pump; and
- causing contaminated fluid from said source to pass sequentially through said pumps.

Claim 17 (original): The method as set forth in claim 1, and further comprising the additional step of:

- preheating the temperature of the fluid entering said pump with heat provided from the temperature of fluid exiting said pump.

Claim 18 (original): The method as set forth in claim 1 wherein a fuel is entrained in the fluid supplied to said pump.

Claim 19 (original): The method as set forth in claim 1 wherein a reagent is entrained in the fluid supplied to said pump.

Claim 20 (original): The method as set forth in claim 1, and further comprising the additional steps of:

- sampling the fluid exiting said pump to determine the extent to which contaminants therein have been converted; and
- adjusting the operation of said pump so that substantially all of said contaminants are converted by passing such contaminated fluid through said pump.

Claim 21 (currently amended): The method of altering a fluid-borne contaminant, comprising the steps of:

- providing a positive-displacement pump having an inlet and an outlet;
- connecting said pump inlet to a source of contaminated fluid;

Appl. No. 10/765,807

Amendment dated June 6, 2006

Response to Office Action of March 24, 2006

operating said pump so as to elevate the temperature of the fluid and contaminants passing through said pump to at least about 200° C.; and

controlling the time during which the temperature of said fluid and contaminants are elevated;

thereby to alter substantially all of said contaminants passing through said pump.